

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An immobilization method, comprising the steps of:

~~carrying out electrospray such that~~electrospraying a solution containing at least one objective substance ~~is supplied by supplying the solution~~ into a capillary and applying an electric voltage ~~is then applied on~~ to the solution to allow electrostatic atomization thereof, and

~~carrying out immobilization such that~~electrostatically immobilizing the objective substance in the atomized solution ~~atomized in the step of carrying out the electrospray~~ is immobilized on an object, ~~which is to be coated and has an arbitrary shape~~, in a dried state by applying an electrostatic force while retaining functionality and/or activity of the objective substance to form a dried microstructure having a thickness on the order of nanometers;

_____ wherein:

_____ electrospraying further comprises at least one of shifting the capillary, changing a direction of spray by arbitrarily changing an angle of the capillary, and shifting the object to be coated; and

_____ electrospraying further comprises adjusting a flow rate of the solution so as to establish the following constant relational expression between a pressure and the flow rate:

_____ $P=b(V_c-V)+c$, wherein:

_____ P represents pressure,

_____ B and c represent constants,

_____ V represents actual discharge volume, and

V_c represents a volume indicating value and V_c = at,
where a is a constant and t is an amount of time,

so that the objective substance is uniformly accumulated on a
more extent area of the material to be coated.

2-3. (Canceled)

4. (Currently Amended) The immobilization method as described in claim 1,
wherein ~~the electro spray step also comprises the steps of~~ electrospraying further comprises:
_____ previously defining, on the basis of a kind of the solution, an analytical curve
representing a relationship between a duration of electrostatic atomization and a thickness of
the microstructure, and
_____ using the analytical curve ~~corresponding to the kind of the solution used to~~
define the duration of the electrostatic atomization depending on a desired film thickness.

5-11. (Canceled)

12. (Currently Amended) The immobilization method as described in claim 1,
wherein ~~the electrostatic atomization in the electro spray step is carried out using a capillary~~
~~having~~ has a tip portion of 100 μm or more in inner diameter.

13. (Currently Amended) The immobilization method as described in claim 1,
wherein ~~the electro spray step comprises the steps of~~ electrospraying further comprises:
_____ performing the electrostatic atomization while providing a minute range of a
periodic change in voltage applied on the solution to distinguish an electrostatic atomization
state and a gas discharging state, and
_____ ~~monitors~~ monitoring an amount of change in current value of the solution
using an ampere meter.

14-18. (Canceled)

19. (Currently Amended) The immobilization method as described in claim 1, wherein:

multiple capillaries are provided and each of the capillaries is connected with multiple tubes having their own valves, and

~~the electrospray step comprises the step of~~ electrospraying further comprises:
_____ individually opening or closing the valve to concentrate a pressure force of the solution to at least only one of the capillaries so that degassing and/or dipping can be easily performed.

20-23. (Canceled)

24. (Currently Amended) The immobilization method as described in ~~claim 23~~ claim 1, further comprising ~~the step of:~~

carrying out pressure reduction or evacuation in the inside of ~~the a~~ a case surrounding a space in which at least both the electrostatic atomization and the immobilization is carried out.

25. (Withdrawn-Currently Amended) An immobilization apparatus, comprising:
means for electrospraying, by which a solution containing at least one objective substance is supplied into a capillary and an electric voltage is then applied on the solution to allow electrostatic atomization thereof; and

means for supporting an object, ~~which is to be coated and has an arbitrary shape, on which~~ with the objective substance is ~~immobilized~~ in a dried state by applying an electrostatic force while retaining functionality and activity of the objective substance to form a dried microstructure having a thickness on the order of nanometers; ~~and~~
~~_____ at least one of means for shifting the capillary, means for changing the angle of the capillary to an arbitrary angle, or means for shifting the object to be coated~~

wherein:

the means for electro spraying comprises at least one of a means for shifting the capillary, changing a direction of spray by arbitrarily changing an angle of the capillary, or shifting the object to be coated; and

the means for electro spraying further comprises means for adjusting a flow rate of the solution so as to establish the following constant relational expression between a pressure and the flow rate:

$P=b(V_c-V)+c$, wherein:

P represents pressure,

B and c represent constants,

V represents actual discharge volume, and

V_c represents a volume indicating value and $V_c = at$, where a is a constant and t is an amount of time,

so that the objective substance is uniformly accumulated on a more extent area of the material to be coated.

26. (Withdrawn) The immobilization apparatus as described in claim 25, wherein the means for electro spraying performs electrostatic atomization while providing a minute range of a periodic change in voltage applied on the solution, and the immobilization apparatus further includes means for measuring a current, which monitors an amount of change in current value of the solution.

27. (Currently Amended) A method of manufacturing a microstructure having a thickness on the order of nanometers, comprising the steps of:

~~carrying out electro spray by which~~electro spraying a solution containing at least one objective substance suitable for ~~the formation of~~forming a fiber ~~is supplied by supplying the solution~~ into a capillary and ~~applying an electric voltage is then applied on to~~ the solution to allow electrostatic atomization thereof; and

electrostatically immobilizing the objective substance in the atomized solution ~~atomized by the electrospray step~~ on an object, ~~which is to be coated and has an arbitrary shape~~, in ~~the~~ dry state while retaining ~~the~~ functionality and/or activity of the objective substance to form a dried fibrous microstructure having a thickness on the order of nanometers;

_____ wherein:

_____ electrospraying further comprises at least one of shifting the capillary, changing a direction of spray by arbitrarily changing an angle of the capillary, and shifting the object to be coated; and

_____ electrospraying further comprises adjusting a flow rate of the solution so as to establish the following constant relational expression between a pressure and the flow rate:

_____ $P=b(V_c-V)+c$, wherein:

_____ P represents pressure,

_____ B and c represent constants,

_____ V represents actual discharge volume, and

_____ V_c represents a volume indicating value and $V_c = at$,

where a is a constant and t is an amount of time,

_____ so that the objective substance is uniformly accumulated on a more extent area of the material to be coated.